

## REMARKS

Applicants thank the Examiner for indicating that claims 23 and 30 would be allowable if rewritten in independent form to include all limitations of any intervening claims.

Claims 1, 13-17, 20-24, and 27-31 are pending in the application. Claims 1, 16, and 24 are independent. By the foregoing Amendment, claim 1 has been amended. These changes are believed to introduce no new matter and their entry is respectfully requested.

### Objection to Claim 1

In the Office Action, the Examiner objected to claim 1 citing informalities. By the foregoing Amendment, Applicants have amended claim 1 to accommodate the Examiner. Accordingly, Applicants respectfully request that the Examiner reconsider and remove the objection to claim 1.

### Rejection of Claims 1, 13-17, 20, 24, 27, and 31 Under 35 U.S.C. §102(e)

In the Office Action, the Examiner rejected claims 1, 13-17, 20, 24, 27, and 31 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,721,464 to Pain et al. (hereinafter “*Pain*”). Applicants respectfully traverse the rejection.

A claim is anticipated only if each and every element of the claim is found, either expressly or inherently, in a reference. (MPEP §2131 *citing Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628 (Fed. Cir. 1987)). The identical invention must be shown in as complete detail as is contained in the claim. *Id. citing Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989)). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Regarding independent claim 1, in the Office Action, the Examiner states that *Pain* discloses an active pixel sensor having a sensor PD for producing a sensor potential, a pull-down circuit 1150 for implementing a pull-down function during which the sensor potential is pulled down to a hard reset level, a reset voltage coupled to the pull-down circuit, and a reset transistor

coupled between the reset voltage line and the sensor, wherein during the pull-down function the reset transistor is conducting and the pull-down circuit operates to pull down the sensor potential below the selected critical level, the pull-down function (hard reset) being performed prior to a soft reset when the sensor potential is reset to a selected (hard reset) level. Applicants respectfully disagree.

Applicants respectfully submit that the Examiner's assertion that the "whole circuit 1150" is a pull-down circuit is confusing. For example, if the whole circuit 1150 is the pull-down circuit, then the sensor (photodiode PD), which the Examiner asserts is part of the circuit 1150 cannot also be that which the circuit 1150 is trying to pull down. Similarly, if the whole circuit 1150 is the pull-down circuit, then the reset voltage line (the Examiner does not specify where the reset voltage line is), which the Examiner asserts is "part of" the circuit 1150 cannot also be "coupled to" the circuit 1150 as the Examiner asserts. Finally, if the whole circuit 1150 is the pull-down circuit, asserting that the reset transistor is part of the circuit 1150 also is in error. Applicants respectfully request that the Examiner clarify which elements in *Pain* specifically read on the elements recited in claim 1. Absent such a showing, the Examiner has failed to make out a prima facie case of anticipation of claim 1 over *Pain* and claim 1 is thus patentable over *Pain*.

Regarding independent claim 16, in the Office Action, the Examiner states that the method claim is also met by the analysis of claim 1. Applicants respectfully disagree.

Since the Examiner is relying on the analysis of claim 1 with respect to *Pain*, Applicants reiterate that the Examiner's analysis with respect to claim 1 is confusing. As such, the Examiner's analysis with respect to claim 16 is confusing as well. To wit: Applicants respectfully submit that the Examiner's assertion that the "whole circuit 1150" is a pull-down circuit is confusing. For example, if the whole circuit 1150 is the pull-down circuit, then the sensor (photodiode PD), which the Examiner asserts is part of the circuit 1150 cannot also be that which the circuit 1150 is trying to pull down. Similarly, if the whole circuit 1150 is the pull-down circuit, then the reset voltage line (the Examiner does not specify where the reset voltage line is), which the Examiner asserts is "part of" the circuit 1150 cannot also be "coupled to" the

circuit 1150 as the Examiner asserts. Finally, if the whole circuit 1150 is the pull-down circuit, asserting that the reset transistor is part of the circuit 1150 also is in error. Applicants respectfully request that the Examiner clarify which elements in *Pain* specifically read on the elements recited in claim 16. Absent such a showing, the Examiner has failed to make out a *prima facie* case of anticipation of claim 16 over *Pain* and claim 16 is thus patentable over *Pain*.

Regarding independent claim 20, in the Office Action, the Examiner states that it is also seen in *Pain* that the sensor is coupled through a plurality of transistors to a bit line (pix-out) and the bit line is used (*in general*) to pull down the sensor potential. Applicants respectfully disagree (emphasis added).

Applicants respectfully submit that the Examiner is required to show that the identical invention is shown in as complete detail as is contained in the claim, either expressly or inherently. Applicants respectfully submit that the Examiner appears to concede that *Pain* fails to expressly teach a bit line to pull down the sensor potential when the Examiner asserts that the pix-out in *Pain* is used *in general* to pull down the sensor potential. That is, there is no express teaching of a bit line to pull down the sensor potential. If the Examiner is asserting that this teaching is inherent in *Pain*, Applicants respectfully disagree.

To establish inherency, an Examiner must provide rationale or evidence tending to show inherency. MPEP §2112 IV. If relying on extrinsic evidence, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. (MPEP §2112IV *citing In re Oelrich*, 666 F.2d 578, 581-582 (CCPA 1981)). If relying on rationale, an Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the prior art (emphasis in original). (MPEP §2112IV *citing Ex parte Levy*, 17 USPQ.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Because the Examiner has not cited any evidence to support this concept, it appears that the Examiner is relying on “rationale” to show that pix-out would inherently pull down the

sensor potential. Applicants respectfully disagree and submit that it does not necessarily flow that pix-out ***pulls down*** the sensor potential. The Examiner's assertion that the pix-out performs this function "in general" is elusive language. Moreover, this is not the standard. The standard is whether it necessarily flows from *Pain* that pix-out pulls down the sensor potential. Applicants respectfully submit that it does not.

If the Examiner's language is intended to assert that it is well known that a bit line pulls down the sensor potential, Applicants respectfully request the Examiner provide a ***reference*** or ***affidavit*** pursuant to MPEP §2144.03 to support the assertion. Absent such an affidavit or reference, the Examiner has not made out a *prima facie* case of anticipation with respect to claim 20 and claim 20 is thus patentable over *Pain*.

Claims 13-15 properly depend from claim 1 and are thus patentable for at least the same reasons that claim 1 is patentable. Claims 17 and 20 properly depend from claim 16 and are thus patentable for at least the same reasons that claim 16 is patentable. Claims 27 and 31 properly depend from claim 24 and are thus patentable for at least the same reasons that claim 24 is patentable. (MPEP §2143.03 (citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988))). Accordingly, Applicants respectfully request that the Examiner reconsider and remove the rejection to claims 1, 13-17, 20, 24, 27, and 31.

#### Rejection of Claims 21-22 and 28-29 Under 35 U.S.C. §103(a)

In the Office Action, the Examiner rejected claims 21-22 and 28-29 under 35 U.S.C. §103(a) as being obvious over *Pain* in view of U.S. Patent No. 6,917,027 to Krymski (hereinafter "*Krymski*"). Applicants respectfully traverse the rejection.

To establish a *prima facie* case of obviousness, the Examiner must show that the cited references teach each and every element of the claimed invention. (MPEP §2143.) *citing In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was independently known in the prior art. *KSR Int'l C. v. Teleflex, Inc.*, No 04-1350 (U.S. Apr. 30, 2007). If a combination or modification to a reference is used, an Examiner must show that there

is some expectation of success that the combination or modification proffered would predictably result in the claimed invention. Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the U.S. Supreme Court in *KSR* include the *Graham* factors of determining the scope and content of the prior art, ascertaining the differences between the claimed invention and the prior art, and resolving the level of ordinary skill in the pertinent art.

Once the *Graham* factual inquiries are resolved, the Examiner must explain why the difference(s) between the cited references and the claimed invention would have been obvious to one of ordinary skill in the art. The rationale used must be a permissible rationale. The USPTO promulgated Examination Guidelines for Determining Obviousness in View of *KSR* in the Federal Register, Vol. 72, No. 195 (October 10, 2007). These *KSR* Guidelines enumerate permissible rationales and the findings of fact that must be made under the particular rationale.

Claims 21-22 properly depend from claim 16 and are thus patentable for at least the same reasons that claim 16 is patentable. Claims 28-29 properly depend from claim 24 and are thus patentable for at least the same reasons that claim 24 is patentable. (MPEP §2143.03 (citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988))). Accordingly, Applicants respectfully request that the Examiner reconsider and remove the rejection to claims 21-22 and 28-29.

## CONCLUSION

Applicants respectfully submit that all grounds for rejection have been properly traversed, accommodated, or rendered moot and that the application is now in condition for allowance. The Examiner is invited to telephone the undersigned representative if the Examiner believes that an interview might be useful for any reason.

Respectfully submitted,

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